This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-7 (cancelled)

8. (previously presented) A method for loading/populating a primary B+tree in a memory of a computer system having an associated mapping table, the method comprising:

generating a row of the mapping table for each row of the primary B+tree; and

storing in each row of the mapping table a row identifier for a corresponding row of the primary B+tree, the row identifier comprising a primary key column value for each row of the primary B+tree and a guess-DBA.

9. (previously presented) A method for maintaining a circular dependency between a mapping table row in a memory of a computer system and a primary B+tree row in the memory of the computer system, the method comprising:

computing a length of a mapping table row based upon a length of a primary key and an overhead of a guess-DBA;

utilizing the computed length to identify a mapping table block that can accommodate the row;

reserving a slot in the identified mapping table block, wherein an address of the block and a reserved slot form a mapping table physical row identifier;

inserting a primary B+tree row containing the physical row identifier into the primary B+tree;

utilizing a leaf block address of the primary B+tree row to construct a row of the mapping table; and

inserting the mapping table row in the reserved slot.

10. (original) The method according to claim 9, further comprising:

carrying out a partition maintenance operation on the primary B+tree; and

rebuilding the mapping table after the partition maintenance.

11. (original) The method according to claim 9, further comprising:

carrying out a partition maintenance operation on the primary B+tree; and

maintain the mapping table during the partition maintenance.

12. (original) The method according to claim 9, further comprising:

carrying out a partition maintenance operation on the primary B+tree and rebuilding the mapping table on-line.

13. (original) A computer program product for performing a process for indexing a primary B+tree, the computer program product comprising:

a computer readable medium; and

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of:

generating a row of a mapping table for each row of the primary B+tree; and

storing in each row of the mapping table a row identifier for a corresponding row of the primary B+tree, the identifier comprising a primary key column value and a guess-database address for each row of the primary B+tree.

14. (original) A system for performing a process for indexing a primary B+tree, the system comprising:

a processor operable to execute computer program instructions; and

a memory operable to store computer program instructions executable by the processor, for performing the steps of:

generating a row of a mapping table for each row of the primary B+tree; and

storing in each row of the mapping table a row identifier for a corresponding row of the primary B+tree, the identifier comprising a primary key column value and a guess-database address for each row of the primary B+tree.

15. (new) A method of referencing rows of a primary B+tree in the memory of a computer system, the method comprising:

generating a mapping table in the memory of the computer system, the mapping table having a row for each row of the primary B+tree; and

storing in each row of the mapping table a primary key value from the primary B+tree, wherein the mapping table provides one-to-one mapping between primary keys of the primary B+tree structure and physical row identifiers of the mapping table.

16. (new) The method according to claim 15, further comprising:

storing in each row of the mapping table a guess-DBA, database block address of a leaf block of the primary B+tree, where a corresponding primary B+tree row is likely to be found.

17. (new) A method of generating a mapping table in a memory of a computer system, comprising:

generating a row of the mapping table for each row of a primary B+tree; and

storing in each row of the primary B+tree a mapping table row identifier, the mapping table row identifier comprising a physical row identifier of a corresponding mapping table row.

18. (new) The method according to claim 17, wherein the mapping table row identifiers are stored at a fixed offset from a beginning of each row of the primary B+tree.

19. (new) The method of claim 18, further comprising

generating an auxiliary structure for the primary B+tree in the memory of the computer system, the auxiliary structure comprising row identifiers of corresponding mapping table rows, the row identifiers referring to a primary B+tree row.

20. (new) A method for maintaining a circular dependency between a mapping table row in a memory of a computer system and a primary index row in the memory of the computer system, the method comprising:

computing a length of a mapping table row based upon a length of a primary key and an overhead of a guess-DBA;

utilizing the computed length to identify a mapping table block that can accommodate the row;

reserving a slot in the identified mapping table block, wherein an address of the block and a reserved slot form a mapping table physical row identifier;

inserting a primary index row containing the physical row identifier into the primary index;

utilizing a leaf block address of the primary index row to construct a row of the mapping table; and

inserting the mapping table row in the reserved slot.

21. (new) The method according to claim 20, further comprising:

carrying out a partition maintenance operation on the primary index; and

rebuilding the mapping table after the partition maintenance.

22. (new) The method according to claim 20, further comprising:

carrying out a partition maintenance operation on the primary index; and

maintain the mapping table during the partition maintenance.

23. (new) The method according to claim 20, further comprising:

carrying out a partition maintenance operation on the primary index and rebuilding the mapping table on-line.